

REMARKS

The Examiner is thanked for his guidance and comments provided in the detailed Office Action dated January 20, 2004. Applicants especially appreciate that the Examiner has considered all of the cited references.

In the Office Action, the Examiner objects to the drawings because they include reference numbers not mentioned in the specification. The Examiner objects to the disclosure for containing a minor informality, and objects to claim 18. The Examiner then rejects claims 1-52 under 35 U.S.C. §112 ¶2, §102, and/or §103. These objections and rejections are fully responded to below in conjunction with the amendments made to the claims.

STATUS OF CLAIMS

Having canceled claims 1-44, claims 45-52 are pending in the present application. Claims 45 and 49 have been amended to overcome the Examiner's concern relating to "and." No new material is believed to have been added by the amendments.

I. Objections

With respect to the objection to the drawings, page 12 of the specification has been revised. With respect to the objection to page 16, line 20, page 16 has been revised. No new material is believed to have been added by these revisions. The Examiner is respectfully requested to withdraw the objections.

II. Objections and Rejections to Canceled Claims

Objections to and rejections of claims 1-44 are moot because these claims have been canceled without prejudice or disclaimer.

III. Claims 45-52

1. 35 USC §112 ¶2

In ¶7, the Examiner rejects claims 45-52 because term “and” is used after “at least one of.” Although Applicants believe the originally presented claims particularly point out and distinctly claim the invention, the term “and” has been amended to “or” in order to expedite the prosecution of the present application.

In ¶8, the Examiner “asks, how is the information ‘related’ to the specified qualities?” For the purpose of answering this question and without limiting the term “related,” Applicants respectfully submit that this term is not indefinite, but merely broad. For instance, information “related” to “a processing time required to perform the at least one process” can be the time required to complete a process, the uniformity of wafers processed, etc. (See, e.g., p. 15 of the present application.)

Having fully responded to the comments by the Examiner relating to 35 USC §112, Applicants respectfully request that the rejection under §112 be withdrawn.

2. 35 USC §103

The Examiner rejects claims 45-46 and 49-50 under 35 USC §103 (a) over US Pat. No. 5,862,054 issued to Li (the “Li patent”) and US Pat. No. 6,604,012 issued to Cho et al. (the “Cho patent”). The Examiner rejects claims 47 and 51 under 35 USC §103 (a) over the Li and Cho patents, and further in view of U.S. Pat. No. 6,074,443 issued to Venkatesh et al. (the “Venkatesh” patent). The Examiner also rejects claims 48 and 52 under 35 USC §103 (a) over the Li, Cho and Venkatesh patents, and further in view of U.S. Pat. No. 6,618,692 issued to Takahashi et al. These rejections are respectfully traversed.

The Cho and Li patents cannot be combined due to lack of motivation. The Cho patent is directed to a wafer lot dispatching system that selects the most suitable equipment for a succeeding process. (See, e.g., the Abstract and Col. 3, ll. 27-34 of the Cho patent.) To achieve this goal, the system uses the relationship between the results of the preceding process and the equipment and process conditions of the succeeding process. (See, e.g., Col. 3, ll. 15-19 of the Cho patent.) In contrast, the Li patent describes that its goal is to address a major problem of collecting historical process data without overwhelming real time process control. (See, e.g., col. 1, ll. 53-61 of the Li patent.) The Cho patent does not teach or suggest that adding real time process control (as described in the Li patent) would be beneficial. Similarly, the Li patent does not teach or suggest that it would be beneficial to use the relationship between the results of the preceding process and the equipment and process conditions of the succeeding process. Hence, one skilled in the art would not have combined these two references, in view of a lack of motivation to do so.

Additionally, the Li and Cho patents cannot be combined because they teach away from each other. In particular, the Li patent describes that, when its system detects process failures, it alerts an engineer to handle the failures. (See, e.g., col. 4, ll. 19-31 of the Li patent) However, the Cho patent states that such a conventional system involving an engineer, among other things, would not yield an optimal solution because it does not use the relationship between the results of the preceding process and the equipment and process conditions of the succeeding process. (See, e.g., col. 2, ll. 38-61 of the Cho patent.) Hence, these references teach away from each other and cannot be combined.

Even if the Cho and Li patents can be combined as suggested by the Examiner, the combination fails to teach or suggest the claimed invention. For instance, the combination does

not teach or suggest, among other things, the claimed feature relating to receiving “a request from an external application to qualify the first and second chambers for a first requested process.” Although the Examiner asserts that the Cho patent teaches this feature and cites Col. 3, ll. 26-34, the cited portion only describes selecting the “most suitable” equipment. In other words, the system described in the Cho patent can select only one (i.e., the MOST suitable equipment); whereas, the claimed invention of the present application can select any and all equipment that is “qualified.” This claimed feature allows the invention of the present application to utilize many pieces of processing equipment, while the invention described in the Cho patent only uses the MOST suitable equipment.

Hence, Applicants respectfully request that the Examiner withdraw these rejections.

IV. Information Disclosure Statement

In ¶3 of the Office Action, the Examiner states that all the cited references have been considered. As noted above, Applicants thank the Examiner for considering the cited references. However, the Examiner stated that he has “lined through the remaining references that are not considered to be material to the patentability of the claimed invention,” and has asked Applicants to identify any references material to the patentability of the application among the “lined through references.” It is submitted that the references (which need not be identified as “material” (see, e.g., 37 CFR 1.97 and 1.98.)) have been cited primarily from potentially related applications to comply with Applicants’ duty of disclosure, and it is believed that all references considered by the Examiner should be cited on patent(s) that may issue from the present application.

CONCLUSION

The Examiner is respectfully requested to withdraw the objections and rejections and to examine the pending claims favorably.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees, which may be required for this Amendment, or credit any overpayment to deposit account no. 08-0219.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to deposit account no. 08-0219.

Respectfully submitted,
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